

Application No.: 10/615,622
Amendment Dated March 5, 2007
Reply to Office Action of January 4, 2007

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Remarks/Arguments:

Claims 1, 21 and 23 have been amended. No new matter is introduced herein. Claims 1-29 are pending.

Claims 1-17, 19-25 and 29 were rejected under 35 U.S.C. §102(b) as being anticipated by Ohta (U.S. Pat. No. 5,895,129). Although the Office Action Summary does not include claim 29 as being pending, Applicants believe claim 29 was inadvertently excluded in the Office Action Summary and in the §102(b) rejection on p. 2 of the Office Action because it is discussed on p. 8 of the Office Action with respect to the rejection under 35 U.S.C. §102(b). It is respectfully submitted that this ground for rejection is overcome for the reasons set forth below.

Claim 1 has been amended so that it recites, in part:

"permanently deforming the focus adjustment structure to move the lens to focus light onto the image sensor."

Support for the amendment to claim 1 can be found, for example, at p. 3, lines 12-28; p. 4, line 30-p. 5, line 17; and Figs. 2, 3A and 3B.

Ohta discloses, in Fig. 1, an optical system 1 including variator 102 and RR 104 lens groups, held by respective holding members 102A and 104A that are fabricated by a plastic (Col. 3, line 43-Col. 4, line 6). Ohta further discloses that, due to a change in temperature, the holding members may expand and contract, causing the lens groups to de-focus (Col. 7, lines 25-42). Control circuit 13 receives a signal from temperature sensor 12 and drives variator 102 and RR 104 using a corrected position in order to correct for the de-focusing caused by the holding members 102A and 104A due to the temperature change (Col. 7, lines 1-10; Col. 8, line 11-Col. 9, line 24; Col. 9, lines 36-39; and Fig. 6).

Ohta does not disclose or suggest permanently deforming the focus adjustment structure to move the lens to focus light onto the image sensor, as recited in claim 1. Ohta, instead, teaches that deformation of the holding members cause the lens groups to de-focus, and corrects for the de-focusing by the holding members due to temperature changes. Ohta is silent on permanently deforming a focus adjustment structure in order to focus light onto the image sensor. Thus, Ohta does not include all of the features of claim 1.

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With respect to claims 4 and 5, the Examiner asserts, on p. 3 of the Office Action, that that "air surrounding the holding members is read on as heating element." Applicants respectfully traverse this ground for rejection. Applicants note that "it is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principle evidence upon which a rejection is based" (see MPEP §2144.03). Ohta is silent regarding a heating element that heats at least some of the heat shrink material to permanently deform the focus adjustment structure, as recited in claim 4 (dependent upon claim 1) and as disclosed in the subject invention. Applicants respectfully request that the Examiner provide support in Ohta for a heating element that heats a heat shrink material. As discussed above, Ohta teaches correcting for de-focusing caused by the holding members due to a temperature change and are silent regarding permanently deforming a focus adjustment structure. Thus, Ohta can not disclose a heating element to permanently deform the focus adjustment structure. In addition, claim 5 recites that "at least some of the heat shrink material is heated by radiant energy" but does not recite a "heating element," as asserted by the Examiner. Thus, Ohta does not include all of the features of claims 4 and 5.

With respect to claim 6, the Examiner asserts, on p. 3 of the Office Action, that "it is inherent that applying laser energy the area surrounding the heat shrink material will heat the material causing it to expand due to the temperature increase." This ground for rejection is respectfully traversed. Applicants respectfully point out that it is understood by the skilled person that heating a heat shrink material will cause the material to retract. Applicants respectfully request that the Examiner provide substantial evidence in Ohta to support the asserted inherency that applying laser energy to a heat shrink material will cause the material to expand. Ohta is silent regarding heating a heat shrink material by laser energy, as recited in claim 6. Thus, Ohta does not include all of the features of claim 6.

With respect to claims 8 and 9, the Examiner asserts, on p. 4 of the Office Action, that ambient air is equivalent to energy applied uniformly or asymmetrically to a shrinkable material. This ground for rejection is respectfully traversed. Applicants respectfully request that the Examiner show specific support in Ohta that air is applied uniformly or asymmetrically to the holding members. As discussed above, Ohta teaches that a temperature change causes the holding members to de-focus the lens groups. Accordingly, the skilled person would not consider that ambient air surrounding the holding members to be equivalent to applying energy or that Ohta would apply energy to the holding members because to do so would de-focus the

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lens groups. Ohta is silent on applying energy uniformly or asymmetrically to a shrinkable material, as recited in claims 8 and 9. Thus, Ohta does not disclose or suggest all of the features of claims 8 and 9.

With respect to claim 10, the Examiner asserts, on p. 4 of the Office Action, that Ohta discloses guiding the lens holder while applying energy to at least some of the shrinkable material. Applicants respectfully traverse this rejection. As discussed above with respect to claims 8 and 9, Ohta is silent on applying energy to the holding members. Thus, Ohta can not disclose or suggest guiding the lens holder while applying energy to at least some of the shrinkable material. Thus, Ohta does not include all of the features of claim 10.

For the reasons set forth above, claims 1, 4, 5, 6, 8, 9 and 10 are not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Ohta and claims 2, 3, 7, 11 and 12 which depend on claim 1 are not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Ohta for at least the same reasons as claim 1.

With respect to claim 13, this ground for rejection is respectfully traversed. In particular, Ohta does not disclose or suggest:

"a focus adjuster operable to deform the focus adjustment structure to move the lens whereby light is focused onto the image sensor"

as required by claim 13.

Ohta is described above. Ohta does not disclose or suggest a focus adjuster operable to deform the focus adjustment structure to move the lens, as recited in claim 13. As discussed above, Ohta does not deform the focus adjustment structure. Instead, control circuit 13 of Ohta corrects for de-focusing caused by the holding members due to a temperature change (Col. 7, lines 1- 10 and 25-40). Ohta is silent regarding a focus adjuster that deforms a focus adjustment structure to move the lens. Thus, Ohta does not include all of the features of claim 13.

With respect to claims 14-17, 19 and 20 the Examiner asserts, on p. 5-6 of the Office Action, that "it is inherent the heat generated by the motor applies energy to the material." Applicants respectfully traverse this ground for rejection. Applicants respectfully request that the Examiner show specific support in Ohta for a motor that generates heat and applies energy

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to the holding members. As discussed above with respect to claims 8 and 9, Ohta is silent on applying energy to a shrinkable material. Thus, Ohta does not include all the features of claims 14-17, 19 and 20.

For the reasons set forth above, claims 13-17, 19 and 20 are not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Ohta.

With respect to claim 21, claim 21 has been amended to recite, in part:

"the focus adjustment structure is deformed until light passing through the lens is focused onto the image sensor"

Support for the amendment to claim 21 can be found, for example, at p. 3, lines 18-24; p. 4, line 30-p. 6, line 7; and Figs. 3A and 3B.

Ohta is discussed above. Ohta does not disclose or suggest a focus adjustment structure that is deformed until light passing through the lens is focused onto the image sensor. As discussed above, Ohta corrects for de-focusing by the holding members due to a temperature change (Col. 7, lines 1- 10 and 25-40). Ohta is silent regarding a focus adjustment structure that is deformed until light is focused onto the image sensor. Thus, Ohta does not include all of the features of claim 21.

Because Ohta does not disclose or suggest all of the limitations of claim 21, claim 21 is not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Ohta and claims 22-25 and 29 which depend from claim 21 are not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Ohta.

Applicants acknowledge with appreciation the Examiner's finding that claim 18 and 26-28 include allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim. Applicants have not amended claims 18 and 26-28 into independent form because it is submitted that respective base claims are allowable for at least the reasons set forth above.

In view of the forgoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1-17, 19-25 and 29 and the objection to claims 18 and 26-28.

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The Director is hereby authorized to charge or credit Deposit Account No. 18-0350 for any additional fees, or any underpayment or credit for overpayment in connection herewith.

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